

PROCEEDINGS  
OF THE  
BIOLOGICAL SOCIETY OF WASHINGTONREVISION OF THE POCKET GOPHERS OF THE  
GENUS *CRATOGEOMYS*.

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Nearly 40 years have elapsed since the pocket gophers of the genus *Cratogeomys* were revised by Merriam (North Amer. Fauna, No. 8, pp. 150-162, Jan. 31, 1895). No species or subspecies have hitherto been added to those listed by him. The known range of the genus has, however, been extended east to near the mouth of the Rio Grande and in other directions; and much more ample material is now available for study.

The general range of the genus reaches from southeastern Colorado southward through the Great Plains and over the Mexican tableland region, east of the continental divide. Near the southern end of the Mexican Plateau the genus is carried upward by the land surface and reaches its most varied development in the high valleys and on the upper slopes of some of the highest mountains of the continent. The territory embraced by the genus *Cratogeomys* in general dispersal is shared, in different parts, with the genera *Geomys*, *Thomomys*, and *Platygeomys*. While different genera may occur in similar situations in close proximity, no two appear to inhabit the same local terrain. Merriam (supra cit.) referred to the occurrence of *Cratogeomys castanops* in "isolated areas." More or less interrupted distribution resulting in isolation has no doubt been an important factor in the formation of the 25 geographic races that it now seems desirable to recognize. Of the number of races mentioned 16 are described as new.

In describing color, Ridgway's "Color Standards and Color Nomenclature," 1912, has been utilized, supplemented by other terms that seem more accurate and applicable to some of the

blended tones and details. Specimens examined, unless otherwise indicated, are in the U. S. National Museum.

For the loan of specimens for study our thanks are due to Dr. Thomas Barbour and Dr. Glover M. Allen, of the Museum of Comparative Zoology.

LIST OF SPECIES AND SUBSPECIES.

**Cratogeomys castanops Baird.**

[References under subspecies.]

*Distribution.*—Isolated areas on the high plains and lower mountain slopes from southeastern Colorado southward through eastern New Mexico, western Texas, Chihuahua, Coahuila, Nueva Leon, northern Tamaulipas, eastern Durango, eastern Zacatecas to central southern San Luis Potosi.

**Cratogeomys castanops castanops (Baird).**

*Pseudostoma castanops* Baird, Report Stansbury's Exped. to Great Salt Lake, p. 313, June, 1852. Type from "Prairie road to Bent's Fort," near the present town of Las Animas, Colorado.

*Geomys castanops* Leconte, Proc. Acad. Nat. Sci. Philadelphia, vol. 6, p. 163, 1852.

*Cratogeomys castanops* Merriam, North Amer. Fauna, No. 8, p. 159, January 31, 1895.

*Distribution.*—Great Plains region in the Arkansas River Valley, Colorado, and south into northeastern New Mexico (Chico Springs).

**Cratogeomys castanops perplanus, subsp. nov.**

*Type.*—From Tascosa, Oldham County, Texas (altitude 3,000 feet). No. 97171, ♂ adult, skin and skull, U. S. National Museum (Biological Survey collection), collected by Vernon Bailey, June 5, 1899. Original number 6941.

*Distribution.*—Plains region from the Canadian River Valley, northwestern Texas and northeastern New Mexico, south to the upper Colorado River Valley, in the central western part of Texas.

*General characters.*—Closely allied to *C. c. castanops* of southeastern, Colorado; size and color about the same; differing in cranial details, especially the decidedly greater breadth and flatness of the braincase.

*Color.*—*Type:* Upper parts near cinnamon buff, purest on sides, slightly darkened on head and over back by dusky-tipped hairs; forearms and thighs like sides; under parts overlaid with pinkish buff; ears blackish; fore feet brownish; hind feet whitish; tail thinly clothed with buffy hairs.

*Skull.*—Very similar to that of typical *castanops*, but braincase lower and decidedly broader and flatter; squamosals projecting farther over auditory meatus; premaxillae usually reaching farther beyond posterior

ends of nasals; nasals long and lachrymals small and inconspicuously mortised into maxillae as in *castanops*; dentition about the same.

*Measurements*.—*Types*: Total length, 285 mm.; tail vertebrae, 84; hind foot, 40. An adult female topotype: 282; 89; 38. *Skull* (type): See table, p. 153.

*Remarks*.—In *C. c. perplanus* the long nasals and the small lachrymals set inconspicuously into the maxillae show close relationship to *castanops*. The braincase is rather high, but lower and flatter than in *castanops* and the lateral expansion of the squamosals is pronounced.

*Specimens examined*.—Total number, 7, as follows:

New Mexico: Cuervo, 1.

Texas: Big Spring, 1; Hale Center, 1; Stanton, 1; Tascosa (type locality), 3.

#### *Cratogeomys castanops lacrimalis*, subsp. nov.

*Type*.—From Roswell, Chaves County, New Mexico (altitude 3,500 feet). No. 119071, ♂ adult, skin and skull, U. S. National Museum (Biological Survey collection), collected by James H. Gaut, September 13, 1902. Original number 476.

*Distribution*.—Pecos River Valley in southeastern New Mexico, and the Pecos and the northern side of the Rio Grande Valley in western Texas.

*General characters*.—Similar in size and color to typical *C. c. castanops* of southeastern Colorado, but important cranial characters, notably the lower, flatter braincase and larger lachrymals quite distinctive. Differing from *C. c. perplanus* of the plains region to the eastward in combination of salient cranial details, including the larger lachrymals.

*Color*.—*Type*: Upper parts pinkish buff on anterior half of body, becoming cinnamon buff on posterior half, slightly darkened on head and back by dusky-tipped hairs; under parts overlaid with pinkish buff; ears dusky; fore feet pale buffy; hind feet whitish; tail thinly clothed with pale buffy hairs, becoming dusky at tip.

*Skull*.—Similar in general to typical *castanops*; braincase similar in width, but much lower and flatter; nasals shorter, broader anteriorly; lachrymals much heavier, projecting more prominently into orbits and more broadly overlapping frontals as viewed from above; auditory bullae less fully inflated, less bulging below level of basioccipital; upper incisors usually more strongly recurved. Compared with that of *perplanus* the skull is similar in general size, but braincase narrower, lower and flatter; nasals shorter, broader anteriorly; lachrymals heavier; auditory bullae less inflated, less bulging below level of basioccipital; upper incisors usually more strongly recurved.

*Measurements*.—*Type*: Total length, 299 mm.; tail vertebrae, 99; hind foot, 36. Two adult male topotypes: 300, 309; 97, 105; hind foot, 37, 38. Two adult female topotypes: 265, 268; 81, 76; 35, 38. *Skull* (type): See table, p. 153.

*Remarks*.—*C. c. lacrimalis* closely resembles typical *castanops* and *perplanus* in color, but the cranial characters pointed out are quite constant

and distinctive in specimens from localities within the general range of the subspecies as outlined.

*Specimens examined.*—Total number, 45, as follows:

New Mexico: Ancho, 1; Carlsbad, 2; Eddy, 3; Fort Sumner, 1; Parker Lake (east of Organ Mountains), 4; Roswell (type locality), 7; Roswell (35 miles north), 1; Santa Rosa, 1; Tularosa, 2; Weed, 2.

Texas: Alpine, 1; Boquillas, 2; Davis Mountains (15 miles southwest of Toyahvale), 1; El Paso, 2; Fort Lancaster, 1; Howard Springs (5 miles south), 1; Kent, 1; Langtry, 1; Marathon, 5; Marfa, 3; Sierra Blanca, 1; Valentine, 1; Van Horn, 1.

*Cratogeomys castanops hirtus*, subsp. nov.

*Type.*—From Albuquerque, New Mexico (altitude 5,000 feet). No. 58325, ♂ adult, skin and skull, U. S. National Museum (Biological Survey collection), collected by J. A. Loring, January 17, 1894. Original number 1558.

*Distribution.*—Upper part of Rio Grande River Valley, north-central New Mexico.

*General characters.*—A dark-colored subspecies, with long, dense pelage. Closely allied to *C. c. lacrimalis* of the Pecos River Valley, but upper parts more heavily mixed or overlaid with black, and cranial features divergent. Similar in general to typical *castanops*, but upper parts more profusely mixed with black and combination of cranial characters distinctive.

*Color.*—*Type* (fresh winter pelage): Upper parts near cinnamon buff, purest along lower part of sides, the middle of face, top of head and back rather heavily mixed with black; under parts in general overlaid with pinkish buff, varying to cinnamon buff across throat and chest; outer sides of forearms like sides; ears encircled with black; fore feet dusky; hind feet white; tail rather well-haired, light brownish above, somewhat paler below, becoming white toward tip all around.

*Skull.*—Very similar to that of *lacrimalis*, but braincase rather narrow; zygomata less widely spreading, more strongly decurved, shorter along outer sides; jugals shorter, more extensively overlapped above by maxillae and squamosals (maxillae and squamosals more widely separated in *lacrimalis*); premaxillae broader; lachrymals similar, but less prominent and less projecting into orbits; dentition about the same. Contrasting with typical *castanops* as follows: Braincase lower and flatter; nasals shorter; frontals reaching farther along median line anteriorly, and lateral extensions broader between maxillae and premaxillae; zygomata narrower, more decurved anteriorly, shorter along outer sides; jugals shorter, more extensively overlapped above by maxillae and squamosals; lachrymals larger, crossing fronto-maxillary suture and more broadly overlapping frontals as viewed from above; auditory bullae large, but less bulging below plane of basioccipital; dentition similar, but upper incisors more strongly recurved.

*Measurements.*—*Type*: Total length, 278 mm.; tail vertebrae, 88; hind foot, 34. An adult female topotype: 251; 71; 34. *Skull* (type) see table, p. 153.

*Remarks.*—*C. c. hirtus* is distinguished externally by its darker upper parts, owing to the heavier admixture of black, as compared with the related forms. It is probably restricted in range to the upper part of the Rio Grande Valley.

*Specimens examined.*—Three, all from the type locality.

*Cratogeomys castanops angusticeps*, subsp. nov.

*Type.*—From Eagle Pass, Texas. No. 24503/31908, ♂ adult, skin and skull, U. S. National Museum (Biological Survey collection), collected by Clark P. Streater, November 11, 1890. Original number 434.

*Distribution.*—Northern side of Rio Grande River Valley, from near mouth of Pecos River at least to Eagle Pass.

*General characters.*—Similar to *C. c. lacrimalis* of the Pecos Valley, New Mexico, in external appearance; color about same; size smaller; skull narrower, and of much slenderer proportions. Color about as in *C. c. perplanus* of northwestern Texas, but size much smaller, and cranial details divergent.

*Color.*—*Type* (acquiring fresh pelage): Upper parts near cinnamon buff, purest along sides, the top of head and back moderately overlaid with black; throat, chest, and forearms pinkish buff; abdominal region buffy whitish; ears black but inconspicuous; fore feet blackish, except digital bristles which are white; hind feet and tail thinly clothed with mixed grayish and dusky hairs.

*Skull.*—Similar to that of *lacrimalis*, but smaller, narrower, slenderer, less arched; upper longitudinal profile usually straighter; zygomata slenderer, less expanded at antero-external angle, the orbital margin of maxilla descending in a more nearly even curve to jugal; jugal narrower, less broadly spatulate anteriorly; auditory bullae and mastoids rather fully inflated, the latter tending to protrude more prominently below ends of squamosal processes; dentition similar. Compared with that of typical *perplanus* the skull is much smaller, relatively narrower, less angular and heavy; braincase lower; rostrum narrower and shorter; nasals shorter, scarcely reaching plane of anterior ends of lateral processes of frontals (usually passing well beyond this plane in *castanops*); zygomata more slender, less expanded at antero-external angle; jugal narrower, less broadly spatulate, less deeply inserted in maxilla anteriorly; lacrymals larger and usually more evenly joined to both frontal and maxilla as viewed from above (tending to articulate mainly with maxilla in *perplanus*); basioccipital with sides parallel between auditory bullae as in *perplanus*; dentition lighter.

*Measurements.*—*Type*: Total length, 274 mm.; tail vertebrae, 85; hind foot, 37. Average of three adult male topotypes: 267 (250–280); 83 (79–85); 36 (35–37). Average of five adult female topotypes: 254 (244–265); 78 (74–86); 34.5 (33–36). *Skull* (type): See table, p. 153.

*Remarks.*—This rather well-marked subspecies appears to be limited to the northern side of the Rio Grande. It exhibits a departure in cranial details from forms inhabiting the southern side and indicates the effectiveness of the river as a barrier along its lower course. Specimens from near

the mouth of the Pecos River have somewhat heavier skulls and grade toward *lacrimalis*.

*Specimens examined*.—Total number, 13, all from Texas, as follows:

Texas: Eagle Pass (type locality), 9; Juno, 1; Samuels, 1; Langtry, 1; Sanderson, 1.

***Cratogeomys castanops clarkii* Baird.**

*Geomys clarkii* Baird, Proc. Acad. Nat. Sci. Philadelphia, vol. 7, p. 332, April, 1855. Type from Presidio del Norte, on the Rio Grande, at or near the present town of Ojinaga, Chihuahua, Mexico.

*Distribution*.—Mexican side of Big Bend section of Rio Grande Valley, in northeastern Chihuahua and northern Coahuila, Mexico.

*Remarks*.—This form, described many years ago and referred by authors to the synonymy of typical *castanops* is still imperfectly known, but warrants subspecific recognition as shown by comparison of the type, an adult female, with material from many localities within the general range of the species. It is similar to typical *castanops* in size and probably in color (type faded and original color no longer clearly discernible), but differs in cranial details as follows: Braincase decidedly lower and flatter; nasals shorter; lacrymals heavier, the external ends more recurved and projecting farther into orbit; mastoids smaller; auditory bullae narrower, less inflated, more compressed laterally; dentition lighter. The skull is similar in size and general features to that of *lacrimalis* which inhabits the adjacent northern side of the Rio Grande, but the mastoids are smaller, the auditory bullae narrower, more compressed laterally, the molariform teeth narrower, and the incisors less strongly recurved. A specimen from near the Rio Grande, northern Coahuila, opposite Samuels, Texas, is light in color, the general tone near pinkish buff, the dark-tipped hairs on dorsum inconspicuous. The skull is somewhat more elongated and not so flat as in the type; but owing to agreement in other cranial details the specimen is assigned to *clarkii*.

***Cratogeomys castanops consitus*, subsp. nov.**

*Type*.—From Gallego, Chihuahua, Mexico (altitude 5,500 feet). No. 50924, ♂ young adult, skin and skull, U. S. National Museum (Biological Survey collection), collected by Clark P. Streater, December 16, 1892. Original number 2416.

*Distribution*.—Elevated plains of Chihuahua, east of the Sierra Madre.

*General characters*.—Similar to *C. c. clarkii*, of the southern side of the Rio Grande Valley near the "Big Bend," but decidedly smaller; cranial characters distinctive. Contrasting strongly in smaller size with *C. c. lacrimalis* of southeastern New Mexico and western Texas; skull also differing in detail.

*Color*.—*Type* (fresh winter pelage): Upper parts cinnamon buff, purest along sides, the top of head and back thinly overlaid with black; forearms and thighs like sides; under parts pinkish buff; ears dusky, but not distinctly encircled by black; fore feet pale buffy; hind feet whitish; tail rather well

haired, pale buffy on basal half all around, becoming brownish on terminal portion, except for a few whitish hairs on extreme tip.

*Skull*.—Very similar to *clarkii*, but smaller and of slenderer proportions; maxillary arm of zygoma relatively narrower, as viewed from above; jugal more slender, less expanded anteriorly at point of insertion in maxilla; mastoid process of squamosal projecting outward and downward, the posterior border less curved forward; mastoids more swollen and bulging posteriorly; auditory bullae, more rounded, less compressed laterally; maxillary toothrows shorter. Contrasted with that of *lacrimalis*, the skull is much smaller and lighter in structure; maxillary arm of zygoma relatively slenderer; auditory bullae bulging farther below level of basioccipital; maxillary toothrows shorter.

*Measurements*.—*Type*: Total length, 225 mm.; tail vertebrae, 68; hind foot, 31. An adult female topotype: 242; 82; 33. *Skull* (type): See table, p. 153.

*Remarks*.—*C. c. consitus* is a well-marked geographic race occupying the high plains region of Chihuahua. While closely allied to *clarkii*, it is readily distinguished by the smaller size and weaker cranial development.

*Specimens examined*.—Total number, 8, all from Chihuahua, as follows: Gallego (type locality), 2; Samalayuca, 2; Santa Rosalia, 4.

#### *Cratogeomys castanops tamaulipensis*, subsp. nov.

*Type*.—From Matamoros, Tamaulipas, Mexico. No. 116535, ♀ adult, skin and skull, U. S. National Museum (Biological Survey collection, collected by Nelson and Goldman, February 8, 1902. Original number 14885.

*Distribution*.—Plains of northern Tamaulipas, northern Nuevo Leon, and east-central Coahuila.

*General characters*.—A medium-sized subspecies characterized by broad, flat braincase, broad, truncately wedge-shaped basioccipital, inflated mastoids and narrow auditory bullae. Similar in size and color (except conspicuous black ear patches) to *C. c. clarkii* of northeastern Chihuahua and *C. c. angusticeps* of Eagle Pass, Texas, but pelage shorter and thinner; skull broader and differing in detail, especially the broader, more tapering or wedge-shaped basioccipital and more inflated mastoids. Smaller than typical *castanops* of southeastern Colorado; pelage shorter and thinner; color similar, but black auricular patches larger; cranial characters distinctive.

*Color*.—*Type* (Fresh winter pelage): Upper parts between pinkish buff and cinnamon buff, purest along sides and across lower part of rump, the top of head moderately mixed with black; under parts overlaid with light buff; ears black and encircled by conspicuous black patches; fore feet, except whitish digital bristles, dark brownish; hind feet whitish; tail light buffy at base, the hairs becoming brownish and more scanty on terminal two-thirds.

*Skull*.—Similar to those of *clarkii* and *angusticeps* but braincase broader, the squamosal shelves more extended laterally over auditory meatus; supraoccipital region more deeply excavated, leaving more strongly up-

turned lateral ridges overlapping mastoids; basioccipital decidedly broader, more wedge-shaped (sides of basioccipital nearly parallel between bullae in *clarkii*); mastoids larger, more fully inflated; molariform teeth larger. Compared with that of typical *castanops* the skull is smaller, with shorter rostrum and nasals, and broader, flatter braincase; squamosal shelves more extended laterally over auditory meatus; zygomata less expanded at antero-external angle; jugal less broadly spatulate anteriorly; lacrymals larger; supraoccipital region more excavated between mastoids; mastoids larger, more fully inflated; basioccipital decidedly broader, more wedge-shaped (sides of basioccipital nearly parallel between bullae in *castanops*); bullae narrower anteriorly, more compressed laterally; dentition similar, but incisors narrower.

*Measurements.*—*Type*: Total length, 270 mm.; tail vertebrae, 83; hind foot, 35.5. A young adult male topotype: 275; 86; 38. Average of three adult female topotypes: 258 (253–261); 75 (74–77); 37 (35–39.5). *Skull* (type): See table, p. 153.

*Remarks.*—The record of specimens taken at Matamoros extends the known range of the species along the southern side of the Rio Grande Valley to near the coast of the Gulf of Mexico. The genus *Cratogeomys* is not known to occur north of the Rio Grande in southern Texas, that general region being occupied by representatives of the genus *Geomys*. Specimens from Monclova, Coahuila, have longer, denser pelage than topotypes, and in cranial details, especially the narrower basioccipital, grade toward *clarkii*.

*Specimens examined.*—Total number, 14, as follows:

Coahuila: Monclova, 2.

Nuevo Leon: Montemorelos, 6.

Tamaulipas: Matamoros (type locality), 6.

***Cratogeomys castanops convexus*, subsp. nov.**

*Type.*—From seven miles east of Las Vacas, Rio Grande Valley, Coahuila, Mexico (opposite Del Rio, Texas). No. 127356, ♀ adult, skin and skull, U. S. National Museum (Biological Survey collection), collected by James H. Gaut, June 9, 1903. Original number 1469.

*Distribution.*—Southern side of Rio Grande Valley in vicinity of type locality, northeastern Coahuila.

*General characters.*—Similar to *C. c. clarkii* of the region to the westward, and to *C. c. tamaulipensis* of the lower Rio Grande, but under parts paler than either, the hairs white to roots across abdomen; skull characters, especially convexity in upper longitudinal profile, distinctive. Similar to *C. c. angusticeps* of Eagle Pass region, northern side of Rio Grande, but under parts paler; skull broader, more massive and differing in detail.

*Color.*—*Type* (summer pelage): Upper parts nearly uniform pale cinnamon buff; underparts white to roots of hairs across abdomen, becoming pale buffy, underlaid with plumbeous on chest; forelimbs pale buffy; hind feet whitish; tail pale buffy at base all around, thinly clothed with whitish hairs toward tip.



*Skull*.—Most closely resembling that of *tamaulipensis*, but more massive, and much more strongly and evenly convex in upper longitudinal outline, the highest point near middle of frontal region; rostrum and nasals more decurved anteriorly; nasals shorter, scarcely reaching anterior plane of zygomata; premaxillae broader, the posterior ends more broadly rounded; lambdoid crest more depressed; mastoids similarly inflated and squamosal shelves similarly extended over auditory meatus; supraoccipital region excavated, leaving a strongly upturned lateral ridge overlapping mastoids, much as in *tamaulipensis*; basioccipital narrower, but similarly wedge-shaped; auditory bullae more inflated; incisors broader. Similar to those of *clarkii* and *angusticeps*, but broader and more massive than either; longitudinal profile above more strongly and evenly convex; rostrum broader, more decurved anteriorly; nasals shorter; premaxillae broader, the posterior ends more broadly rounded; interorbital region broader; lambdoid crest more depressed near middle; mastoids more inflated, causing a distinct bulging of squamosals over auditory meatus; supraoccipital region more excavated between mastoids; basioccipital wedge-shaped (sides of basioccipital nearly parallel between bullae in *clarkii* and *angusticeps*); incisors broader.

*Measurements*.—*Type*: Total length, 255 mm.; tail vertebrae, 80; hind foot, 34. *Skull* (*type*): See table, p. 153.

*Remarks*.—*C. c. convexus* is based upon a single specimen representing a combination of characters that appear to warrant the recognition of a new race in northeastern Coahuila. It appears to be more nearly related to *clarkii* and to *tamaulipensis* than to *angusticeps*, which inhabits the opposite side of the Rio Grande Valley. The contrast between the two indicates that the Rio Grande, below the "Big Bend," has been an effective barrier to the passage of these animals for a long time.

#### *Cratogeomys castanops excelsus*, subsp. nov.

*Type*.—From San Pedro, 10 miles west of Laguna de Mayran, Coahuila, Mexico. No. 246533, ♂ adult, skin and skull, U. S. National Museum (Biological Survey collection), collected by E. A. Goldman, March 28, 1926. Original number 23561.

*Distribution*.—Arid interior basin in southwestern Coahuila and northeastern Durango.

*General characters*.—Distinguished from *C. c. consitus* of central Chihuahua, *C. c. clarkii* of northeastern Chihuahua, *C. c. goldmani* of northern Zacatecas, and *C. c. tamaulipensis* of northern Tamaulipas, by much larger size and paler color; cranial details in combination also different.

*Color*.—*Type* (summer pelage): Dorsal area in general between pinkish buff and cinnamon buff, slightly darkened by black-tipped hairs, becoming clear pinkish buff along sides and across lower part of rump; throat and chest pale pinkish buff, rest of underparts buffy whitish; feet and tail thinly clothed with dull whitish hairs. *Young* (in first pelage): Similar to adults but fore feet black, except digital bristles, which are silvery white.

*Skull*.—Similar to those of *consitus*, *clarkii*, and *goldmani*, but much

larger, more angular than any of these; nasals relatively longer. Compared with that of *tamaulipensis* the skull is much larger and heavier; rostrum and nasals longer; braincase less flattened; supraoccipital region less excavated between mastoids; sides of basioccipital more nearly parallel between auditory bullae (more wedge-shaped in *tamaulipensis*); mastoids less inflated, and squamosals therefore less bulged upward; dentition similar.

*Measurements.*—*Type*: Total length, 320 mm.; tail vertebrae, 101; hind foot, 42.5. An adult female topotype: 298; 96; 39.5. *Skull* (type): See table, p. 153.

*Remarks.*—*C. c. excelsus* is the largest of the known forms that appear to be assignable subspecifically to *castanops*. It is probably restricted in range to the interior basin or sink that occupies southwestern Coahuila and northeastern Durango.

*Specimens examined.*—Total number, 6, as follows:

Coahuila: San Pedro (type locality), 3.

Durango: Tlahualilo, 3.

*Cratogeomys castanops subsimus*, subsp. nov.

*Type.*—From Jaral, southeastern Coahuila, Mexico. No. 51048, ♂ adult, skin and skull, U. S. National Museum (Biological Survey collection), collected by Clark P. Streater, January 14, 1893. Original number 2555.

*Distribution.*—Known only from the type locality in the upper part of the Salinas River Valley.

*General characters.*—Closely allied to *C. c. excelsus*, but smaller, color darker, and cranial characters distinctive. Similar in color to *C. c. tamaulipensis*, but black auricular patches smaller; pelage longer and denser; skull more massive and differing in important details.

*Color.*—*Type* (winter pelage): Upper parts from top of head to rump near cinnamon, thinly mixed with black, becoming cinnamon buff along sides; under parts buffy whitish, passing into light pinkish buff on throat, chest, and forearms; feet and tail thinly clothed with mixed whitish and brownish hairs.

*Skull.*—Similar to that of *excelsus*, but somewhat smaller; rostrum shorter, flatter and relatively broader; nasals shorter, flatter, and broader anteriorly; frontal region more broadly channelled between upturned supraorbital ridges along median line at frontoparietal suture, the ridges turning more abruptly inward at this point; ascending branches of premaxillae broader; basioccipital with sides parallel between bullae as in *excelsus*; dentition about the same. Compared with that of *tamaulipensis* the skull is more massive, the rostrum and nasals decidedly broader and flatter; basioccipital with sides parallel between bullae (not wedge-shaped as in *tamaulipensis*); supraoccipital region rising nearly perpendicularly (not deeply excavated between mastoids and tending to incline forward to lambdoid crest as in *tamaulipensis*); mastoids less inflated and squamosals less bulging upward and over them; auditory bullae less compressed laterally, more inflated anteriorly; dentition heavier.

*Measurements.*—*Type*: Total length, 304 mm.; tail vertebrae, 88; hind

foot, 40. An adult male topotype: 295; 104; 40. An adult female topotype: 272; 84; 38.5. *Skull* (type): See table, p. 153.

*Remarks*.—*C. c. subsimus* is closely allied to the neighboring form, *excelsus*, but the cranial peculiarities combined with the differential color seem to justify subspecific recognition.

*Specimens examined*.—Five, all from type locality.

*Cratogeomys castanops goldmani* Merriam.

*Cratogeomys castanops goldmani* Merriam, North Amer. Fauna, No. 8, p. 160, January 31, 1895. Type from Cañitas, Zacatecas, Mexico.

*Distribution*.—Known only from the type locality on the elevated plains of northern Zacatecas.

*Cratogeomys castanops subnubilus*, subsp. nov.

*Type*.—From Carneros, Coahuila, Mexico (altitude 6,800 feet). No. 79482, ♂ adult, skin and skull, U. S. National Museum (Biological Survey collection), collected by Nelson and Goldman, August 12, 1896. Original number 10018.

*Distribution*.—Elevated plains and high mountains of southeastern Coahuila.

*General characters*.—A small, dark-colored subspecies, allied to *C. c. goldmani* of Zacatecas, but very much smaller and color darker. Similar to *C. c. tamaulipensis* of northern Tamaulipas, but much smaller; color darker; pelage longer and denser; skull differing in detail. Contrasting strongly with a geographic neighbor, *C. c. subsimus*, of Jaral, Coahuila, in much smaller size, darker coloration, and cranial features.

*Color*.—*Type* (acquiring fresh pelage): Upper parts cinnamon buff, purest along sides, the top of head and back rather profusely mixed with black; under parts pinkish buff, becoming somewhat lighter in tone across abdomen; fore feet dusky on toes; hind feet white; tail with mixed grayish and brownish hairs, rather well clothed for a member of this group. Summer pelage less mixed with black, as shown by other specimens.

*Skull*.—Small, with relatively broad braincase, and zygomata tending to stand out squarely anteriorly. Closely resembling that of *goldmani* in general proportions, but much smaller; rostrum relatively narrower; auditory bullae more inflated. Similar to that of *tamaulipensis*, but much smaller; braincase similarly broad but squamosals less inflated or bulged upward over auditory meatus; supraoccipital region rising more perpendicularly from foramen magnum to lambdoid crest, the lateral margins overlapping mastoids less upturned; pterygoids broader; basioccipital truncately wedge-shaped as in *tamaulipensis*, but relatively narrower; auditory bullae more rounded and fully inflated, less compressed laterally; dentition similar. Compared with that of *subsimus* the skull is very much smaller, with relatively slenderer, less flattened rostrum and broader braincase; zygomata usually more squarely spreading anteriorly; frontal region flatter, the supraorbital ridges less upturned; pterygoids broader;

basioccipital wedge-shaped (sides of basioccipital nearly parallel in *subsimus*); dentition lighter.

*Measurements.*—*Type*: Total length, 244 mm.; tail vertebrae, 72; hind foot, 34. Two adult male topotypes: 247, 226; 86, 70; 34, 33. Two adult female topotypes: 213, 210; 64, 63; 31, 31. *Skull* (type): See table, p. 153.

*Remarks.*—*C. c. subnubilus* is distinguished by small size and dark coloration. It presents a striking contrast in size, color, and cranial details to its near geographic neighbor, *subsimus*.

*Specimens examined.*—Total number, 23, all from Coahuila, as follows: Carneros (type locality), 7; La Ventura, 16.

#### *Cratogeomys castanops planifrons*, subsp. nov.

*Type.*—From Miquihuana, southern Nuevo Leon, Mexico (altitude 5,000 feet). No. 93942, ♂ adult, skin and skull, U. S. National Museum (Biological Survey collection), collected by Nelson and Goldman, June 9, 1898. Original number 12527.

*Distribution.*—Elevated plains in southern Nuevo Leon.

*General characters.*—A medium-sized, dark-colored form, closely allied to *C. c. subnubilus* of southeastern Coahuila; color slightly darker and richer; size decidedly larger; cranial details different. Similar to *C. c. goldmani* of Zacatecas, but smaller, and color darker, the upper parts more extensively mixed with black; skull of lighter proportions. Smaller than *C. c. tamaulipensis* of northern Tamaulipas; color more cinnamon buffy and more heavily mixed with black; black auricular patches smaller; pelage longer and denser; cranial characters also distinctive.

*Color.*—*Type* (summer pelage): Upper parts between cinnamon buff and cinnamon, purest along sides, the top of head and back rather heavily mixed with black; entire under parts overlaid with pinkish buff; fore feet dull buffy to toes, which are dusky; hind feet whitish; tail clothed with mixed whitish and brownish hairs. *Young* (in first pelage): Upper parts pinkish buff, heavily mixed with black over dorsum; under parts very thinly overlaid with pale buff, the under color deep plumbeous; fore feet buffy, becoming abruptly deep black on toes, except digital bristles which are silvery white; hind feet whitish; tail clothed with blackish hairs, becoming abruptly white at tip in one individual.

*Skull.*—Of medium size with broad, flattened braincase and narrow rostrum; sagittal and lambdoid crests thin and trenchant. Closely resembling that of *subnubilus*, but distinctly larger; sides of frontals slightly upturned even in old males, and braincase broad and flattened as in *subnubilus*; interorbital constriction relatively narrower; pterygoids narrower; palatines narrower, the lateral margins more excised near posterior plane of last molars; molariform teeth heavier. Similar to that of *goldmani*, but smaller, with rostrum relatively narrower and zygomata less widely spreading anteriorly; molariform teeth similar, but relatively rather heavy. Compared with that of *tamaulipensis* the skull is smaller, with similarly broad braincase, but squamosals less distended over auditory meatus;

supraoccipital region less deeply excavated, rising more nearly perpendicularly from foramen magnum, the lateral margins less projecting posteriorly along line of contact with mastoids; basioccipital narrower; auditory bullae more inflated, less compressed laterally; dentition about the same.

*Measurements.*—*Type*: Total length, 268 mm.; tail vertebrae, 80; hind foot, 37. Average of five adult male topotypes: 264 (255–280); 81 (76–85); 35 (33–37). Average of four adult female topotypes: 251 (245–260); 72 (65–75); 33.5 (32–35). *Skull* (type): See table, p. 153.

*Remarks.*—This subspecies combines medium size with rather weak cranial development, although the braincase is relatively broad. The frontal region is flat or with sides very slightly upturned, even in old adults. The sagittal and lambdoid crests exhibited by the older adults are thinner and more trenchant than in most of the nearly related forms.

*Specimens examined.*—Total number, 20, all from Nuevo Leon as follows: Doctor Arroyo, 1; Miquihuana, 19 (9 in Mus. Comp. Zool.).

*Cratogeomys castanops rubellus*, subsp. nov.

*Type.*—From Soledad, near San Luis Potosi, San Luis Potosi, Mexico (altitude 6,400 feet). No. 20507, ♂ adult, skin and skull, Museum of Comparative Zoology (Sanford Collection), collected by W. W. Brown, August 1, 1923.

*Distribution.*—Elevated plains region of southwestern San Luis Potosi.

*General characters.*—Closely allied to *C. c. goldmani* of Zacatecas, but smaller; general color of upper parts darker, near cinnamon instead of cinnamon buff, thinly and inconspicuously overlaid with black; cranial characters distinctive. Similar to *C. c. planifrons* of southern Nuevo Leon, but general color above deeper cinnamon, much less heavily overlaid with black; skull differing in proportions.

*Color.*—*Type* (acquiring fresh pelage): Upper parts near cinnamon, the top of head and back thinly overlaid with black; throat and chest pinkish buff; abdominal region pale pinkish buff; fore feet blackish, except digital bristles, which are silvery white; hind feet blackish on toes and edges of soles, becoming brownish on upper surface of metatarsus; tail thinly clothed with dark brownish hairs.

*Skull.*—Very similar to that of *goldmani*, but smaller and relatively narrower throughout; braincase decidedly narrower; basioccipital slightly wedge-shaped as in *goldmani*. Similar in general to that of *planifrons*, but with narrower braincase and broader rostrum; nasals and premaxillae decidedly broader; zygomata usually narrower, but more squarely spreading anteriorly; basioccipital narrower; auditory bullae larger, more fully inflated; dentition similar.

*Measurements.*—*Type*: Total length, 280 mm.; tail vertebrae, 80; hind foot, 35. Average of five adult males from Morales (near type locality): 265 (255–285); 75 (70–78); 34 (32–36). Average of four adult females from Morales: 240 (240–245); 66 (65–67); 32 (31–33). *Skull* (type): See table, p. 153.

*Remarks.*—*C. c. rubellus* appears to be more closely allied to *goldmani*

than to any other known form but is distinguished by the darker, nearly uniform reddish tone of upper parts and the relatively narrower skull.

*Specimens examined* (Mus. Comp. Zool.).—Total number, 41, all from the State of San Luis Potasi as follows: Morales, 35; San Luis Potosi, 1; Soledad (type locality), 5.

***Cratogeomys castanops peridoneus*, subsp. nov.**

*Type*.—From Rio Verde, San Luis Potosi, Mexico (altitude 3,000 feet). No. 82049, ♂ adult, skin and skull, U. S. National Museum (Biological Survey collection), collected by Nelson and Goldman, January 10, 1897. Original number 10423.

*Distribution*.—Arid plains in the valley of the Rio Verde, forming an eastern terrace of the tableland region in central southern San Luis Potosi.

*General characters*.—A small, dark colored subspecies; upper parts extensively mixed with black; hind feet and tail blackish. Resembling *C. c. planifrons* of southern Nuevo Leon in external appearance, but smaller; color still darker, the upper parts more heavily mixed with black, auricular patches, feet and tail blacker; pelage shorter; skull more angular. Similar in general to *C. c. rubellus* of the higher plateau region near the city of San Luis Potosi, but smaller; upper parts much more heavily mixed with black; ears, feet and tail blacker; pelage shorter and thinner; skull differing in detail.

*Color*.—*Type* (winter pelage): Upper parts between pinkish buff and cinnamon, purest along sides, the top of head and back heavily mixed with black; under parts thinly overlaid with pinkish buff, the under color deep plumbeous and showing through; black auricular patches large; fore feet blackish, the tufts of silvery bristles at posterior edge of soles conspicuous in contrast with dark tone of wrists; hind feet blackish to toes, the toes white; tail blackish, becoming white all around at tip. *Young* (in first pelage): Similar to adults, the back heavily mixed with black.

*Skull*.—Similar to that of *planifrons*, but more angular, although smaller; rostrum relatively broader; nasals broader, less tapering posteriorly; frontals broader anteriorly between premaxillae; outer surface of jugal narrower, less spatulate anteriorly; squamosal arm of zygoma more projecting anteriorly above level of jugal in adult males (anterior end of squamosal arms more evenly confluent with jugal in *planifrons*); basioccipital narrower, slightly wedge-shaped; molariform teeth smaller. Compared with that of *rubellus* the skull is smaller, shorter and relatively broader; auditory bullae less inflated; molariform teeth relatively smaller.

*Measurements*.—*Type*: Total length, 245 mm.; tail vertebrae, 71; hind foot, 31.5. Average of three adult male topotypes: 245 (236–253); 76 (74–78); 33 (32–35). An adult female topotype: 240; 73; 31. *Skull* (type): See table, p. 153.

*Remarks*.—*C. c. peridoneus* is a well-marked subspecies with a rather isolated range on an eastern terrace of the Mexican tableland region. It is the smallest and darkest of the known forms of *C. castanops*.

*Specimens examined*.—Eleven, all from the type locality.

***Cratogeomys merriami* (Thomas).**

[References under subspecies.]

*Distribution*.—Mexican highlands in the general vicinity of the Valley of Mexico, from an altitude of 5,400 feet in the drainage of the Rio Balsas up to 11,500 feet on Mount Ixtaccihuatl.

***Cratogeomys merriami merriami* (Thomas).**

*Geomys merriami* Thomas, Ann. Mag. Nat. Hist., ser. 6, vol. 12, p. 271. October, 1893. Type from "southern Mexico," probably in the Valley of Mexico.

*Cratogeomys merriami* Merriam, North Amer. Fauna, No. 8, p. 152, January 31, 1895.

*Distribution*.—Valley of Mexico (7,600 feet), Valley of Toluca and adjacent mountain slopes up to 11,000 feet in altitude.

***Cratogeomys merriami oreocetes* Merriam.**

*Cratogeomys oreocetes* Merriam, North Amer. Fauna, No. 8, p. 156, January 31, 1895. Type from Mount Popocatepetl, Mexico, Mexico (altitude 11,000 feet).

*Distribution*.—High slopes of Mount Popocatepetl, above range of *C. m. merriami*.

***Cratogeomys merriami peregrinus* Merriam.**

*Cratogeomys peregrinus* Merriam, North Amer. Fauna, No. 8, p. 158, January 31, 1895. Type from Mount Ixtaccihuatl, Mexico, Mexico (altitude 11,500 feet).

*Distribution*.—High slopes of Mount Ixtaccihuatl, above range of *C. m. merriami*.

***Cratogeomys merriami saccharalis*, subsp. nov.**

*Type*.—From Atlixco, Puebla, Mexico (altitude 5,400 feet). No. 55347, ♂ adult, skin and skull, U. S. National Museum (Biological Survey collection), collected by Nelson and Goldman, July 29, 1893. Original number 5279.

*Distribution*.—Valleys drained by upper affluents of the Rio Balsas in southwestern Puebla.

*General characters*.—A large subspecies, closely allied to *C. m. merriami* of the Valley of Mexico, but smaller; color paler; pelage shorter and sparser; cranial details distinctive. Similar in size to *C. m. oreocetes* of Mount Popocatepetl and *C. m. peregrinus* of Mount Ixtaccihuatl, but differing widely in cinnamon coloration and cranial characters.

*Color*.—*Type*: Upper parts near cinnamon, the face, top of head and back moderately mixed with black, becoming paler, the dark hairs thinning out, and passing into cinnamon buff on lower part of sides, forearms and thighs; under parts overlaid with cinnamon buff, the under color pale plumbeous; ears encircled by black patches; feet brownish; tail very thinly clothed basally with light brownish hairs, becoming naked all around at tip.

*Skull.*—Large, angular and massive much as in *merriami*, but smaller, shorter, flatter, and relatively broader; zygomata widest near middle in adult males (widest anteriorly in *merriami*); maxilla articulating about equally with frontal and premaxilla along a convex line as viewed from above (articulating mainly with premaxilla along a straighter line in *merriami*); frontal region shorter, less extended anteriorly between premaxillae; premaxillae narrower, more tapering posteriorly, the ends more pointed instead of bluntly rounded; bullae slightly more fully inflated; molariform teeth smaller. Similar in size and general form to that of *oreocetes*, but frontal region shorter, narrower anteriorly between premaxillae; nasals narrower posteriorly, the ends more deeply emarginate; premaxillae narrower, more tapering posteriorly, the ends more pointed instead of bluntly rounded; dentition similar. Compared with that of *peregrinus* the skull is similar in general size, but braincase narrower, the squamosals more constricted over auditory meatus; maxillary arm of zygoma more convex along line of contact with premaxillae and frontals, as viewed from above; premaxillae narrower, more tapering posteriorly; supraoccipital region rising more nearly perpendicularly from foramen magnum (inclined forward to lambdoid crest in *peregrinus*); dentition similar, but grooves in upper incisors narrower.

*Measurements.*—*Type*: Total length, 338 mm.; tail vertebrae, 92; hind foot, 48. Two adult male topotypes: 327, 330; 89, 95; 47, 46. Average of three adult female topotypes: 298 (285–318); 90 (84–102); 45 (42–48). *Skull* (type): See table, p. 153.

*Remarks.*—*C. c. saccharalis* represents an extension of the range of *merriami* as a species into the lower, warmer belt along the southern border of the Mexican tableland. At the type locality this pocket gopher lives in cultivated fields and is so destructive to sugarcane and other crops that a bounty is paid by some of the hacienda owners. The tails are presented as evidence that animals have been killed.

*Specimens examined.*—Eight, all from type locality.

#### *Cratogeomys merriami irolonis*, subsp. nov.

*Type.*—From Irolo, Hidalgo, Mexico (altitude 7,600 feet). No. 53494, ♀ adult, skin and skull, U. S. National Museum (Biological Survey collection), collected by Nelson and Goldman March 30, 1893. Original number 4520.

*Distribution.*—Elevated Plain of Apam, southern Hidalgo, probably ranging to the eastward over the plains of Tlaxcala and Puebla.

*General characters.*—A very large, rufescent subspecies with a broad massive skull. Closely allied to *C. m. merriami* of the Valley of Mexico; color similar to *merriami* in buffy phase, but somewhat richer, more rufescent; skull shorter and relatively broader. Similar to *C. m. saccharalis* of southwestern Puebla, but larger; color darker and richer; skull larger, more massive, and differing in detail.

*Color.*—*Type*: Upper parts near mikado brown, purest along sides, the top of head and back moderately mixed with black; under parts overlaid



with cinnamon; forearms and thighs about like under parts; auricular patches deep black; fore feet brownish; hind feet whitish; tail scantily clothed with brownish hairs above, white below.

*Skull*.—Very large, angular and massive. Very similar to *merriami*, but shorter and broader; rostrum shorter; braincase broader, the squamosal shelves more projecting laterally; mastoids larger, more inflated and bulging posteriorly, less produced laterally; auditory bullae broader; angle of mandible narrower antero-posteriorly; maxillary toothrow shorter; last upper molar shorter, the posterior lobe less produced. Similar to that of *saccharalis*, but larger; braincase less flattened; premaxillae broader posteriorly; frontals less extended anteriorly between maxillae and premaxillae, the maxillae articulating mainly with premaxillae (articulating about equally with premaxillae and frontals in *saccharalis*), as viewed from above.

*Measurements*.—*Type*: Total length, 318 mm.; tail vertebrae, 88; hind foot, 42. Two adult female topotypes: 333, 320; 95, 90; 43, 43. *Skull* (type): See table, p. 153.

*Remarks*.—The differential characters presented by the specimens upon which the present form is based were pointed out by Merriam (North Amer. Fauna, No. 8, p. 152, Jan. 31, 1895), but the specimens were not separated from typical *merriami*.

*Specimens examined*.—Three, all from the type locality.

***Cratogeomys perotensis* Merriam.**

[References under subspecies.]

*Distribution*.—Higher slopes of the Cofre de Perote and adjacent eastern border of Mexican plateau region in western Vera Cruz.

***Cratogeomys perotensis perotensis* Merriam.**

*Cratogeomys perotensis* Merriam, North Amer. Fauna, No. 8, p. 154, January 31, 1895. Type from Cofre de Perote, Vera Cruz, Mexico (altitude 9,500 feet).

*Distribution*.—Known only from the higher slopes of the Cofre de Perote, western Vera Cruz.

***Cratogeomys perotensis estor* Merriam.**

*Cratogeomys estor* Merriam, North Amer. Fauna, No. 8, p. 155, January 31, 1895. Type from Las Vigas, Vera Cruz (altitude 8,000 feet).

*Distribution*.—Known only from the type locality at the extreme eastern border of the high plateau region, east of the Cofre de Perote in western Vera Cruz.

***Cratogeomys fulvescens* Merriam.**

[References under subspecies.]

*Distribution*.—Open plains of the high plateau region from the western base of Mount Orizaba in eastern Puebla north to the western base of the Cofre de Perote in western Vera Cruz.

***Cratogeomys fulvescens fulvescens* Merriam.**

*Cratogeomys fulvescens* Merriam, North Amer. Fauna, No. 8, p. 161, January 31, 1895. Type from Chalchicomula, Puebla, Mexico (altitude 8,200 feet).

*Distribution.*—Open, elevated plains near western base of Mount Orizaba, eastern Puebla.

***Cratogeomys fulvescens subluteus*, subsp. nov.**

*Type.*—From Perote, Vera Cruz, Mexico (altitude 7,800 feet). No. 54300, ♂ adult, skin and skull, U. S. National Museum (Biological Survey collection), collected by Nelson and Goldman, June 3, 1893. Original number 4929.

*Distribution.*—Open, elevated plains near western base of Cofre de Perote, western Vera Cruz.

*General characters.*—Closely allied to *C. f. fulvescens*, of the high plains at the west base of Mount Orizaba, but general color more yellowish or light ochraceous buffy instead of cinnamon buffy; skull differs in detail. Contrasts strongly with the near geographic neighbor, *C. perotensis estor*, of Las Vigas in light ochraceous buffy, instead of mikado brownish upper parts, absence of black auricular patches, and in important cranial proportions.

*Color.*—*Type* (acquiring fresh pelage): Upper parts near light ochraceous buff, purest on cheeks, sides, forearms and thighs; the top of head and back finely and rather heavily mixed with black; under parts overlaid with light ochraceous buff; ears inconspicuous, without trace of encircling black patches; muzzle blackish; fore feet brownish buff, the digital bristles brownish; right hind foot brownish, left hind foot whitish; tail thinly clothed with mixed brownish and whitish hairs.

*Skull.*—Very similar to *fulvescens*, but less arched; braincase lower, more flattened; lambdoid crest less elevated near middle; auditory bullae shorter, somewhat truncate anteriorly, more inflated than usual in *fulvescens*; molariform teeth slightly smaller. Contrasted with *estor* the skull differs as follows: Rostrum broader, more swollen near base of incisors; braincase narrower; lambdoid crest more abruptly decurved, as viewed in profile from behind; maxillary arm of zygoma broader and heavier; postorbital ridges along fronto-premaxillary suture less developed; premaxillae less extended posteriorly, not reaching plane of lacrymals as in *estor*; jugal much broader anteriorly where set into a broad expansion of maxilla; mastoids and auditory bullae more inflated; molariform teeth smaller.

*Measurements.*—*Type*: Total length, 304 mm.; tail vertebrae, 97; hind foot, 41. A young adult female topotype: 272; 75; 35. *Skull* (type): See table, p. 153.

*Remarks.*—*C. c. subluteus* is distinguished externally by peculiar grizzled yellowish coloration. Merriam (North Amer. Fauna, No. 8, p. 162, Jan. 31, 1895) referred the material upon which this subspecies is based to *fulvescens*, but remarked: "Specimens from Perote are more yellowish and less fulvous than those from Chalchicomula." The new form requires close comparison only with *fulvescens*.

*Specimens examined.*—Two, from type locality.

CRANIAL MEASUREMENTS OF TYPE SPECIMENS (ALL MEASUREMENTS IN MILLIMETERS).

Name	Locality	Number	Sex	Greatest length (median line)	Zygomatic breadth	Width across squamosals (over mastoids)	Interorbital constriction	Length of nasals	Maxillary tooth- row (alveoli)	Upper incisors (width of cutting edge)
<i>Cratogeomys castanops perplanus</i>	Tascosa, Texas	97171	♂	56.9	38	32.7	7	21.1	10.3	7.4
<i>Cratogeomys castanops lacrimalis</i>	Roswell, New Mexico	119071	♂	56	37	32.9	7.3	19	9.5	6.4
<i>Cratogeomys castanops hirtus</i>	Albuquerque, New Mexico	58325	♂	52.4	34.9	30.2	7.7	18.3	10.4	7
<i>Cratogeomys castanops angusticeps</i>	Eagle Pass, Texas	24503	♂	52.8	34	28.3	7.1	18.2	9.7	6.2
		31908								
<i>Cratogeomys castanops consitus</i>	Gallego, Chihuahua	50924	♂	46.2	30	26.3	6.7	16	8.4	5.7
<i>Cratogeomys castanops tamaulipensis</i>	Matamoros, Tamaulipas	116535	♀	48.1	31	27.8	6.9	16.3	10.3	5.6
<i>Cratogeomys castanops convexus</i>	Las Vacas, Coahuila	127356	♀	47.9	32.2	28	8	15.5	9.3	6.1
<i>Cratogeomys castanops excelsus</i>	San Pedro, Coahuila	246533	♂	61.8	41.7	34.8	8.2	22	10.8	7
<i>Cratogeomys castanops subsinus</i>	Jaral, Coahuila	51048	♂	56.2	34.5	32.3	7.7	20	10.4	6.7
<i>Cratogeomys castanops subnubilus</i>	Carneros, Coahuila	79482	♂	46.4	31.2	28.2	7.2	15.4	8.7	5.6
<i>Cratogeomys castanops planifrons</i>	Miquihuana, Nuevo Leon	98942	♂	49.4	33.3	29.8	7	16.5	9.2	6.4
<i>Cratogeomys castanops rubellus</i>	Soledad, San Luis Potosi	20507 <sup>1</sup>	♂	48.4	29.5	26.5	7.8	14.9	8.8	5.4
<i>Cratogeomys castanops peridoneus</i>	Rio Verde, San Luis Potosi	82049	♂	45.8	31	26.7	7.2	14.8	7.8	5.6
<i>Cratogeomys merriami saccharalis</i>	Atlixco, Puebla	55347	♂	65	45.2	33.3	9.5	24.6	11	9.7
<i>Cratogeomys merriami irolonis</i>	Irolo, Hidalgo	58494	♀	59.2	40.3	38	8.3	21.3	11.7	9.2
<i>Cratogeomys fulvescens subluteus</i>	Perote, Vera Cruz	54300	♂	57	38.3	30.3	7.8	20.9	10.8	7.6

<sup>1</sup> Mus. Comp. Zool.